

To: Way, Steven[way.steven@epa.gov]; Schmittdiel, Paula[Schmittdiel.Paula@epa.gov]
From: Wall, Dan
Sent: Mon 3/3/2014 1:22:16 PM
Subject: FW: Sippers in the Animas
[Compare Howardsville to A68.xlsx](#)

Deliberative Process/Ex. 5

From: Peter Butler [mailto:butlerpeter2@gmail.com]
Sent: Sunday, March 02, 2014 8:12 PM
To: Wall, Dan
Cc: 'Lisa Richardson'; Schmittdiel, Paula; Way, Steven
Subject: RE: Sippers in the Animas

Dan – I realize that a lot of people think that most of the loading above Silverton on the Animas comes from the reach between Arrastra and A68. However, by having a sipper at A56, you won't be able to calculate loads because there are no flow measurements. One might think that the flow at the Howardsville gage could be a good approximation, but comparing gage data at Howardsville versus A68, I found that in some years the flow can increase by more than 100% between those two gages in April. This is very surprising because the only named tributary is Arrastra which is north facing and unlikely to have much flow in April. Without the loads it is difficult to calculate how any potential load reductions in this stretch might improve water quality downstream. You might think some more about if a sipper at the Howardville gage might give us more useful information.

Attached is a spreadsheet comparing the April flows at the two gages. It also includes our April data for zinc, cadmium, and manganese for which the annual peak concentrations are April at A68. Cadmium concentrations are around the acute table value standard. I have not been able to identify any pattern between high metal concentrations and different flow regimes at the gages. I also briefly compared flows at the two gages during May through October. It doesn't appear that flow increases by more than 50% between Howardsville and A68 during those months.

Peter Butler

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Cell 970-317-0584

From: Wall, Dan [<mailto:wall.dan@epa.gov>]
Sent: Tuesday, February 25, 2014 10:59 AM
To: Peter Butler
Cc: Lisa Richardson; Schmittdiel, Paula; Way, Steven
Subject: RE: Sippers in the Animas

Hi Peter

We will be placing a mini-sipper just above Arastra at A56, A68 and A72 (plus some canyon stations). This should capture influences above Silverton.

From: Peter Butler [<mailto:butlerpeter2@gmail.com>]
Sent: Friday, February 21, 2014 2:01 PM
To: Wall, Dan
Cc: Lisa Richardson
Subject: Sippers in the Animas

Dan – I understand you are planning to place some sippers in the Animas Watershed this spring. If you are going to place one at A68 in Silverton, we'd like to request one at the Howardville gage farther upstream. Almost every year we see high concentrations of zinc, manganese and cadmium at A68 in April. The cadmium is up around the acute standard. See the graphs in the attached spreadsheet. Most of us believe the sources are between Howardville and Silverton during snowmelt on the south-facing slopes. We'd like to see if that's true and then look more closely for the source.

Peter Butler

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